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AUGUST 1953

FIREMEN

FIFTY-EIGHTH YEAR • NATIONAL FIRE PROTECTION ASSOCIATION

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Observe Fire Prevention Week • October 4-10, 1953

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Discharge Hd. Ft. Water	23	46	69	92	115	138	161	184	207	231
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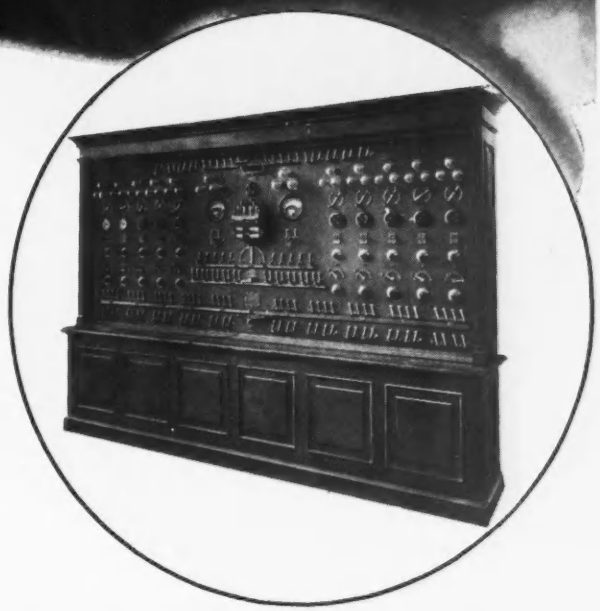

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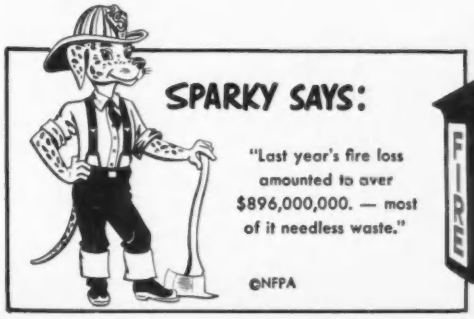

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Firemen

Volume 20 Number 8

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Cover Picture

The cover picture for FIREMEN shows members of the Boston Fire Department making rescues at the recent apartment-house fire of incendiary origin which cost three lives. The purpose of showing the picture is not only to pay tribute to the good work done by the first fire companies in saving the lives of numerous occupants but to re-emphasize the importance of good ladder work as an essential component of fire department operations.

All too many fire departments have been forced through short-sighted economy programs to man their ladder trucks with mere token or "skeleton" crews. In such cases a very great tragedy can result where numerous rescues over ladders must be made in a matter of seconds. In some quarters there is a mistaken notion that men can be taken from engine companies to man ladder equipment. This is a serious fallacy that can contribute to loss of life because where lives are in jeopardy from fire, it is imperative that water be placed on the fire as quickly as possible to prevent further extension and to keep the exits open for egress.

There have been many large disasters where fire fighting has been neglected for a number of minutes because of the necessity for raising ladders and manning lifenets. This has undoubtedly contributed to the extension of fire and loss of life. Good fire department response includes both well-manned engine and ladder or truck companies.

Coordinated Mutual Aid

Most fire departments today appreciate the importance of mutual aid and realize that few municipalities have sufficient fire forces to handle any contingency such as simultaneous large fires and unusual disasters. However, several instances have been reported recently where response made from outside of the city to some extent interfered with fire ground operations. In one instance when a large eastern city experienced a multiple alarm fire at a gasoline distributing plant, a number of suburban fire departments responded directly to the fire, connected to hydrants and reduced the pressure available to local pumpers who were controlling the flames.

It is important that mutual aid plans spell out exactly when response shall be made to a neighboring municipality, on what authority, where the apparatus shall report (i.e. whether to cover vacated stations or go to the fire ground), and whether manpower or equipment is needed. Where outside fire apparatus reports to the fire ground, the officers in charge of this equipment should confer with the appropriate local fire officers regarding the overall plan of operation and utilization of available water supply. Of course, where no local equipment is available at a fire, the outside companies should render such aid as they can without delay, but where their equipment is to supplement local apparatus, it is important that the activity of the outside units be coordinated with the plans of the local fire chief.

Fire Prevention Week

While you are perusing this issue of FIREMEN be sure to take advantage of the convenient order blank on the back cover which will allow you to obtain an early shipment of Fire Prevention Week materials. This year the Week will be observed October 4–10 and in order that all requests for materials may be shipped in time the "deadline" for orders is September 23.

Most fire departments have already made extensive plans for fire prevention activities. However, there are always new methods of presenting the needs and problems of the fire department to the community it serves. Attractive displays, the distribution of literature, parades, and other civic ceremonies in which fire departments participate during Fire Prevention Week in some measure help to make the public aware of the need for fire prevention. To supplement such activities effectively fire department members should make many personal contacts with home owners and businessmen to offer suggestions on the fundamental practices of fire safety.

"Progress" Keynote at Rochester, New York

By Warren Y. Kimball

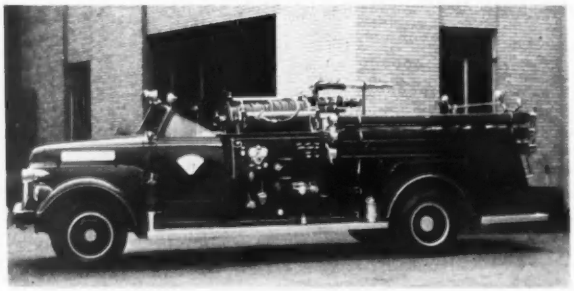
THE Rochester, New York, Fire Department, under Chief John Slattery, this month is completing a fire apparatus modernization program. As a result the oldest apparatus in first line service will be 12 years old. In addition to equipment purchased from the Ward LaFrance Truck Corporation of Elmira, New York, and Peter Pirsch and Sons Company of Kenosha, Wisconsin, the department is especially proud of four 750 gpm pumpers designed by Deputy Chief Louis Vogt of the Maintenance Division and constructed in the fire department shop.

These trucks were built on large GMC chassis meeting Chief Vogt's specifications and now, generally, are known as the "GMC Fire Truck Special." The chassis have a 503 cu. in. engine, heavy duty rear end and axle and use 8:00/25 tires. All Rochester pumpers, including these, have 250 gallon water tanks. The pumps are 750 gpm Class A American Marsh types capable of supplying both high and low pressures simultaneously. Each apparatus has two high pressure reels equipped with Barton "Super Fog" guns, two compartments for 1½-in. hose and two compartments for 2½-in. hose. Four 2½-in. gated inlets (two on each side) permit each pump to obtain full capacity when operating a monitor nozzle carried on the apparatus. In a recent test a monitor nozzle, two Rockwood 1½-in. fog nozzles and two fog guns were operated at correct pressures simultaneously.

Special features of interest to pump operators are the speed and simplicity of operations. A vacuum clutch control switch on the dash permits shifting from road to pump drive (by the driver before he leaves the seat), with correct pressure on the fog guns in 3 seconds. Another vacuum control permits easy and instant shifting of the pump from pressure to volume. An automatic cooling engine system is also provided. A by-pass on the pump keeps water from heating when the nozzles are closed.

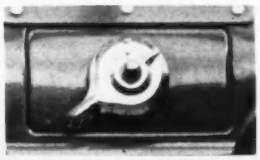
All control lines flow whether in use or not and check valves are provided in cooling lines and tank lines to prevent damage should the operator neglect to close a valve. All discharge valves for both 1½-in. and 2½-in. lines are push-pull type and operate virtually without effort. In addition to three lengths of hard suction hose, a soft suction line is provided having female swivel connections on each end for ease in handling. Special rubber sockets securely hold fog applicators and nozzles in place during travel and eliminate possible delay due to use of clamps and buckles.

New 100-ft. Pirsch aluminum aerial ladder for Truck Company 1. Note large monitor pipe at rear step. Truck has squared fenders and numerous large enclosed compartments. Two more 100-ft. Pirsch aluminum aerial ladders will be received this month.

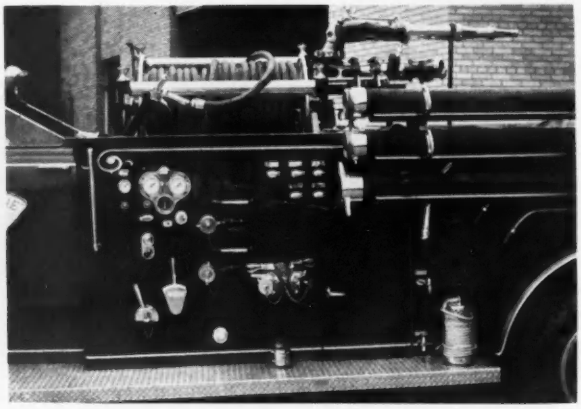


New Engine 17 pumper at Rochester Fire Department headquarters was constructed in fire department shop, with a 750 gpm Class A high pressure pump on a heavy duty chassis.

PLANS are virtually complete for a fire station replacement program that will put all of Rochester's fire companies in new houses at more stragetic locations. Construction is already started on a new fire training center and repair shop facility located on a large tract of land on the Genesee River adjacent to the Airport. The training establishment, under the direction of Deputy Chief Ambrose E. Foos, is intended to be the most complete municipal fire training facility in the nation. It will be used by the Rochester Fire Department as well as by other fire departments. The Department is operating on a three-platoon basis with a 56-hour work week. All fire companies are radio equipped.



(At right)
Vacuum clutch control switch (left of radio speaker) permits shift of transmission from road to pump in "split-second."



Pump operator's panel showing gated 2½-in. inlets, push-pull valves controlling discharge lines, vacuum control for parallel-series operation, and rubber holders for fog guns and applicators.

Preventing Hay Fires

A New Plan by Howard S. Russell, Mutual Farm Underwriters, Waltham, Massachusetts, and Member, NFPA Committee on Farm Fire Protection

FOR controlling fires caused by spontaneous ignition in hay, the most practical means appears to be the use of carbon dioxide injected into the hot spots. Application of this chemical will bring the temperature down rapidly to a point where danger of immediate fire is neutralized. In using this method, the location of the heat being generated must be determined and then the extinguishing attack centered at those points. Hot spots may be located by means of a thermometer enclosed in a metal probe shaped like a spear, although often steam or smoke, or an acrid smell, may indicate the source.

When the thermometer shows the temperature to be dangerous, the farmer's first act should be to call the fire department. Then he should call the nearest forest fire tower (here in Massachusetts), if it is at a season when the towers are manned. Otherwise the fire chief should call the nearest supervising fire warden of the Department of Conservation.

Ready at six different points in Massachusetts are State Conservation Department trucks which have been equipped with a supply of CO_2 extinguishing appliances and a hay thermometer.

The State Division of Forestry is cooperating by furnishing the means of getting the chemical to the endangered farm and injecting it properly into the hay. A thermometer, supplied by these companies, is available at every Forestry County Agent's office in Massachusetts for use by any farmer who needs to test his hay. (It is worth-while for any farmer who has heavy hay storage to buy his own thermometer.)

The dangerous temperature in hay is 170 degrees, according to an authoritative leaflet prepared by the University of Massachusetts. Up to that point temperatures may rise, only eventually to recede. If the temperature goes beyond 175 degrees, however, it is likely to rise in a comparatively short time to the point of ignition, and fire results. Ignition may occur from 300 to 500 degrees, various authorities estimate.

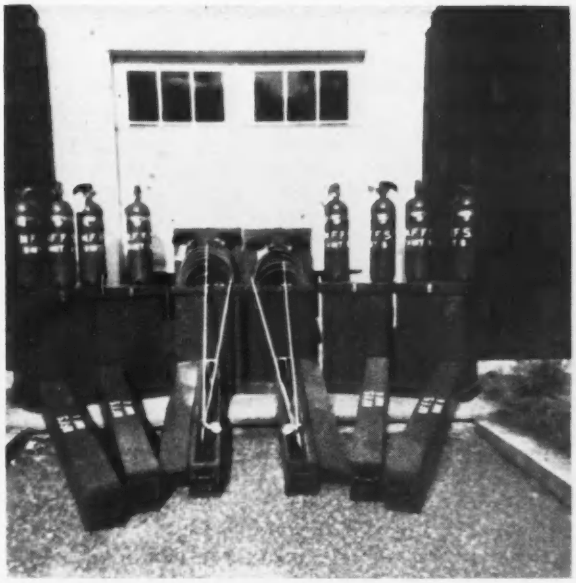
No attempt should ever be made to open hot hay without having the fire department present with ample men and lines charged with water. In several notable examples in recent years, intelligent work by a fire department has resulted in saving barn structures and cattle, even though stored hay was lost. No one should step out onto a hay mow where heating is suspected except on a plank, with helpers handy if he should happen to drop into a hot pocket.

FREQUENTLY there is a question as to whether baled hay is as susceptible to heating as loose hay. Though an extra charge is now made in New England fire insurance rates for loose hay, nevertheless several fires have occurred in recent years in baled hay. Damp hay, whether loose or baled, is subject to spontaneous ignition. So it is especially undesirable to stack bales tightly without adequate ventilation between the piles. A hay dryer, properly engineered, helps much in curing hay safely.

The use of CO_2 is not a permanent means for preventing spontaneous ignition. The gas merely retards the heating process and brings the temperature down to a point where the hay can be moved without danger.

When a call is received by the State Forest Fire Service for help on heating hay, they will send a crew with the special CO_2 apparatus. Fittings have been provided so that the dispenser may be connected to any CO_2 cylinder, even to the small types sometimes found in garages, if the original supply is not sufficient. In order to be primed for instant action, two of the large cylinders are in readiness at each of six different well distributed stations of the State Department of Conservation, and the equipment is neatly boxed. The crews are assembled by radio, load the apparatus, and take the nearest route to the farm affected. The six central points at which gas cylinders and apparatus are in readiness are Massachusetts State Conservation headquarters at Pittsfield, Amherst, Spencer, Stow, Ipswich and Dighton.

The companies composing the Mutual Farm Underwriters have been studying spontaneous ignition in hay for many years. The use of CO_2 gas was tried out experimentally by the Underwriters just before the beginning of World War II. During that conflict, the experiments had to be dropped and only recently has the subject again received full attention.



Carbon dioxide extinguishing units used by the Massachusetts State Department of Conservation for controlling heat developed by spontaneous ignition in hay.

The Treatment of Burns

By Dr. William D. Claudy, Board of Police and Fire Surgeons, Washington, D. C.

As a frequent contributor to FIREMEN *in recent years, Dr. Claudy has made available to readers some valuable information on fire department rescue operations. As Fire Department Surgeon in Washington, D. C., he has developed a wide range of knowledge of the dangers and problems that arise on the fire grounds. Two of his previous articles have been reprinted from* FIREMEN *in pamphlet form.* *(See page 13, this issue.)* *In this issue he explains what first aid measures fire fighters should use in the treatment of burns. Dr. Claudy is now serving with the U. S. Army in Europe.*

AMONG first aid crews and rescue squadsmen, perhaps no problem arouses more difference of opinion than that of the proper first aid treatment for burns. This in turn reflects the attitude of the medical profession, for the development of new techniques has been so rapid that it has been difficult for a stable pattern to be evolved and to present these techniques to the first aid teams that must apply them.

Burns and scalds are responsible for 8,000 deaths each year in the United States. Many thousands more suffer severe and disfiguring injuries requiring medical attention, which in many cases is both lengthy and expensive. In addition there are thousands of minor burns, treated at home, in the shop or factory and in the offices of private physicians which are never reported. In spite of this tremendous total, deaths from burns is on the decline. Less than fifty years ago, the total each year was several times as great. Military deaths from this source, likewise have declined. During World War I, 23 percent of those treated for burns died of their injuries, while in World War II this figure dropped to less than 9 percent. Reports from Korea indicate a still further decline in the fatality rate. This directly reflects the effects of the newer medical techniques in burn therapy. Fire departments, rescue squads, first aid teams and others concerned in the early care of burned persons must keep pace with the rapid strides of medicine, and apply, as much as they may, the newer knowledge available from authoritative medical sources.

INTELLIGENT first aid for burns requires that those giving it have at least some basic knowledge of the reasons for certain procedures, and of the alterations in body function caused by burning. Otherwise such first aid becomes a mere "parroting" of maxims frequently not applicable to the case at hand.

Burns of all types are classified as first, second or third degree, according to their severity. Observation of the injured skin usually permits rapid evaluation of the injury. Relatively minor or first degree burns turn the skin pink, more severe (though still first degree) burns turn it red. Second degree burns cause reddening and blistering, while in third degree burns the skin is white, and often charred. Serious burns are found in all degrees, and the extent of the burns is of much greater importance than their degree. It is often difficult to determine the depth of an injury and burns, which at cursory examination appear minor, often prove quite serious.

The burning of skin initiates many changes in body chemistry which are of greater significance than the burn itself. There is a loss of both whole blood and blood plasma, with a resulting concentration or thickening of the remaining circulating blood which physicians term "hemoconcentration." There is likewise a loss of various body salts. Pain from injured nerve endings is often severe and fear and apprehension is marked. In deep burns pain is sometimes less because of complete destruction of the nerve endings responsible for transmitting pain impulses. All these factors combine to produce what is generally termed "shock." The patient becomes pale and sweats copiously, temperature and blood pressure fall, and the pulse becomes fast and faint. The patient may become semi-stuporous, sleepy or confused, and no longer feels the full effect of his injuries.

Nearly three-quarters of those dying from burns, do so as the result of shock. The remaining deaths usually follow infection, liver failure (hepatic necrosis) due to the entrance of certain poisonous substances from the burned area into the liver, adrenal failure, respiratory tract involvement, other injuries received at the same time as the burns, and lowered resistance previous to the burns (as in the elderly, ill, debilitated or very young). Carbon monoxide inhalation often plays a part.

IT IS fortunate that of all the causes of death from burns, that causing the greatest number, shock, is likewise most amenable to treatment. The important steps in the treatment of shock are the control of pain, the administration of fluids, and the maintenance of body heat.

Pain is usually relieved by adequate, but not overdosage, with morphine or codeine and prompt coverage with an adequate dressing. At the present, the administration of narcotics is not considered within the province of the first aid squad, but would become so during mass disasters or atomic attack. Medical corpsmen performed this function efficiently during the late war, and professional rescue squads can readily absorb similiar training. Certainly, first aid teams, squads and ambulances should carry such supplies for use by physicians when they are available at an accident scene. In lieu of this, where delay is inevitable or transportation lengthy, the use of an analgesic such as aspirin, and a mild sedative will assist in relieving pain and calming apprehension.

Adequate dressings are even more effective in relieving pain. The Japanese recognized this after the atomic bombing at Hiroshima and covered the burns met there with almost anything available. Rice powder, raw ground potatoes, cucumber juice and other equally bizarre substances were applied to the burns, and apparently did relieve the pain though they undoubtedly tremendously increased the infection rate.

The greatest single change in burn treatment has been the abandonment of the once popular tannic acid coagulation, which had as its objective the sealing of the wound

by tanning. Other similiar types of sealing coverings, such as paraffin, and certain proprietary sprays should also be abandoned. Tannic acid has been shown to cause liver damage, may seal in infection, causes disfiguring of the underlying skin after healing, and on extremities such as the fingers, toes and male sex organs, may have a tourniquet-like effect, shutting of circulation, and causing gangrene of the extremity.

THE use of sterile gauze and vaseline petroleum jelly is the generally accepted local treatment for first aid. Its use is advocated by the Army in its training manual. The civil defense manual of the Philadelphia County Medical Society states: "Ideal treatment is the pressure dressing of a thin layer of vaseline gauze, a thick layer of surgical waste covered with elastic bandages."

Commercially available is a metal foil packet containing sterile gauze, saturated with vaseline, in an accordian fold, and sealed so as to indefinitely remain sterile. Where hospital facilities are available, and economy is a factor, such gauze can be prepared by placing layers of gauze, folded, in a covered metal tray, after spreading with vaseline, and autoclaving (*sterilizing by steam under pressure* — Ed.) the whole. The tray can be reautoclaved after each use without damaging the contents.

Under certain conditions of mass treatment a dry burn dressing (without the use of an ointment) has been advocated. Primarily developed for use after atomic disasters, it can be quickly and easily applied by relatively untrained persons. Unfortunately, at this time, this dressing is not readily available commercially.

Where burns are extensive (over 20%) a sterile, or freshly ironed sheet or towel may be dipped in water or a soda solution, rung out carefully, so that when unfolded one side will be untouched by the hands, and this side applied to the burn. It may be remoistened by sprinkling if it appears to be drying. Water as it comes from the tap is sufficiently free of bacteria to be used. If a basin is used, it should be scalded before making the solution. (1 teaspoonful of soda to 1 quart of water.)

Rescue squads and ambulances would do well to have such solutions previously prepared and immediately available as part of a burn kit. Jars and solution may be sterilized by placing in boiling water, and tightly capped after sterilizing.

Rings, bracelets and other constricting jewelry should be promptly removed before swelling occurs.

THE administration of fluids to the severely burned patient has always been of great concern to physicians. The use of plasma in overcoming both shock and the hemoconcentration following burns has long been recognized as a sheet anchor in burn therapy. In its dry form it has the advantages of being storable for long periods, is immediately available, requires no blood typing before administration and can be given under field conditions. While the actual administration is usually a medical matter, rescue squads and ambulances having a large and busy service, or in areas where hospitals are distant would do well to carry packaged plasma for administration by medical men, particularly at the scene of wholesale disasters, or where victims may be trapped or pinned in wreckage for considerable periods (train wrecks, etc.). Cost and availability, both factors which in civilian practice have limited the use of plasma under field conditions, may be overcome by the use of plasma volume expanders such as dextran, recently made commercially available. Apparently as effective as plasma, they can be stored for considerable periods in liquid form, and thus are ready for immediate administration. They are packaged with equipment for administration under any conditions.

The administration of whole blood, a valuable procedure in burn therapy, should be limited to hospitals, and can not be considered as a first aid procedure.

THE administration of fluid by mouth, however, is readily available to first aid teams. Burn shock is usually accompanied by extreme thirst, so that there is generally little difficulty in getting patients to consume adequate amounts of fluid by mouth. They may be given water, coffee, tea, or the so-called "burn cocktail." This latter has been recommended by the National Research Council and the National Institutes of Health as well as the Federal Civil Defense administration; it is mentioned in the Civil Defense Supplement to the American Red Cross First Aid textbook.

The solution recommended is made by adding one teaspoonful of salt (sodium chloride) and one-half teaspoonful of either soda (sodium bicarbonate) or sodium citrate to one quart of water. Sodium citrate makes the mixture more palatable. It has, apparently, considerable value both in prevention and treatment of shock. It should be carried by first aid teams and offered liberally to burn victims having 10 or more percent of the body area burned. It should not, of course, be given to unconscious patients. If it causes vomiting, its administration should be stopped.

Body heat of burn victims can be maintained by giving warm fluids, by using blankets, by transporting victims in heated ambulances during cold weather, and where necessary by the use of heating pads, heat blocks or hot water bottles. As in every case of shock, regardless of the cause, teams should be careful not to follow the dictum of preserving body heat too literally. Patients should be kept comfortable; should they complain of being hot, or if the temperature of the air is high, they should not be, willy-nilly, swathed in layers of woolen blankets, to sweat away precious body fluids.

In combating infection, the first aid team's greatest contribution is in preventing further contamination of the burn, by careful application of adequate, smoothly applied sterile protective dressings, and by proper transportation. Wherever possible, during transportation, patients should not lie directly on burned areas or, if this is unavoidable, they should be placed on sterile, or at least clean sheets, which should be taut and unwrinkled.

Physicians now administer routinely to burned patients antibiotics (penicillin aureomycin, terramycin, etc.) which are non toxic, and are effective in preventing a wide range of the infections formerly so common in burned patients. It is also customary to administer prophylactic medication to prevent tetanus (lockjaw) and gas gangrene.

(*Please turn to page 18*)

Portable Pump Powered by Gas Turbine Engine

DEMONSTRATION of the remarkable capacity of a portable pump powered by a hand-started gas turbine engine was given at the Boston, Massachusetts, Naval Yard on July 13. Watching the performance were officers and other personnel of the U. S. Navy, members of the Boston Fire Department, and representatives of industrial concerns. The demonstration was one of a series which is being conducted throughout the country to introduce the use of the gas turbine engine to the fire service.

The compact unit was developed by the Solar Aircraft Company of San Diego, California, for use by the Navy as a portable shipboard fire fighting pump. The manufacturers at present are examining possibilities of use of the unit by municipal and rural fire departments.

Weighing 165 pounds the complete unit, including the centrifugal fire pump and the gas turbine engine, fits into a metal framework 27 x 24 x 25 inches in size. The turbine may be supplied by several types of fuel including gasoline, diesel fuel, jet fuel, or natural gas. An attachable tank which rests on top of the framework holds about a half-hour fuel supply. A replacement container may be put into use without interrupting operation, or a fuel supply line from a larger tank may be attached to the fuel intake.

The pump is started by hand cranking, which is usually done by two men on the double-handled crank shaft. When the tachometer indicates that the turbine shaft has reached the required speed the pump operator opens the throttle, then closes the throttle after ignition has occurred and the tachometer indicates that the turbine has attained the required speed. After cranking is stopped the turbine rotation continues to increase to the full load speed of 45,000 rpm. A series of reduction gears produce a resultant pump speed of 4500 rpm at rated capacity.

The pump has a 4-in. intake and two 2½-in. discharge outlets. During the demonstration two lengths of 2½-in. hose supplied a multiversal nozzle with a 1½-in. tip, then with a 1¾-in. tip. The pump, operating on a suction lift of about 8 feet produced more than 600 gpm at 100 pounds pressure. The manufacturer's data sheet states that for a 16-ft. suction lift the pump will supply 500 gpm at 100 pounds pressure.

Because of the tremendous speed of the turbine shaft a loud high-pitched sound emanates while the unit is in operation. In the immediate vicinity this sound might prove bothersome but would not be of consequence to the pump operator after a few minutes of operation.

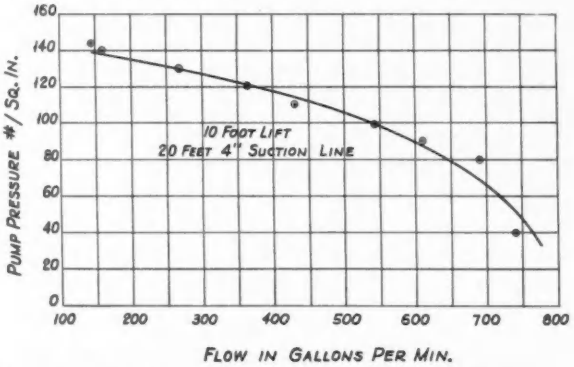
(At left) In Washington, D. C., the portable pump was demonstrated to representatives of the Federal Civil Defense Administration and the Fire Department. Shown with the pump are (left to right) Captain V. M. Thompson; Acting Chief of Dept. Fred Litteral; Chief W. H. Boswell, superintendent of machinery; Chief Instructor Clarence Quick, and Captain Charles Wolz.

Fire fighters at a Navy fire school using the gas turbine powered portable pump in training evolutions. Note fuel container resting on top of pump. Another container may be attached and fuel supply continued without interrupting operation of pump. Also observe the large exhaust outlet at lower right on the turbine.

When fuel ignition occurs flame and heated gases emerge from the exhaust. The flame disappears almost immediately but during operation of the engine personnel should not move into the path of the exhaust gases. The blast of hot gases is apparent at a distance of 15 feet from the exhaust outlet.

Despite this exhaust effect, the gas turbine pump may prove to be an extremely important innovation to the fire service. Initial tests of this portable model indicate discharge capacity in excess of NFPA standards for portable pumping units for the fire service. In fact, a model with just a little more pumping capacity would be adequate to pass the requirements for 500 gpm Class B fire department pumpers, and because of its light weight could be transported on almost any vehicle to do a fire fighting job.

Also demonstrated at Charlestown was a generator powered by the same type of turbine. Primarily designed for military or naval airborne use, this generator could also serve as a mobile unit carried on a truck or trailer. Two models are in production. The T-41-M-1 provides 8 kva of alternating current and up to 14 kw of direct current. The T-40-M-2 is a direct current generator rated at 14 kw.



Recent tests of the Solar gas turbine powered portable pump produced the flow data illustrated above. With a 4½-in. suction line a greater output could be expected, but note that the pump exceeded 500 gpm at 100 pounds pressure.

Fires in the News

Jersey City, New Jersey, June 24. Despite the efforts of members of 18 Jersey City fire companies using twenty-nine 2½-in. hose lines a $300,000 fire loss occurred in this unsprinklered 1-story brick and concrete warehouse used for the manufacturing of matches. A foreman sent a box alarm when the fire was discovered but the highly combustible contents allowed the fire to spread rapidly.

Whittier, Alaska, June 17. (*Associated Press Wirephoto.*) A multi-million dollar loss was estimated when fire destroyed 3 warehouses, 2 docks, and other structures in Alaska's main military port.

Syracuse, New York, June 20. (*United Press Photo.*) Backfire of a truck ignited fumes at a loading rack of this gasoline and oil bulk storage plant. Nine fire fighters were injured in the resultant fire that threatened 6 buildings, 3 tractor trailers, 6 automobiles, a van truck and the loading rack.

St. Neree, Quebec, June 13. (*Photo by Walter Edwards.*) Lack of water supply led to destruction by conflagration of more than 25 per cent of this town's municipal property. One man died and 90 persons lost their homes before the fire was controlled.

Philadelphia, Pennsylvania, June 22. (*Associated Press Wirephoto.*) In one of 4 multiple alarms fires in 30 hours in this city this 5-story brick warehouse containing rubber and other defense materials was destroyed. Fire spread to 5 other buildings necessitating response by 37 fire companies and the Philadelphia reserve fire force.

Quebec City, Quebec, June 16. (*Montreal Gazette Photo.*) More than 3,000 tons of newsprint in rolls and a storage warehouse were destroyed in this fire which caused damage estimated at $700,000. Nine city fire companies, two fireboats, and a rescue squad responded to alarms.

(*At right*) **Elsinboro Point, New Jersey, June 6.** (*United Press Photo.*) An estimated $12,000,000 damage resulted when these two tankers collided about 400 yards from shore and 10 miles south of Wilmington, Delaware. One of the tankers carried 160,000 barrels of gasoline. One man died, three others were missing, and both ships were totally destroyed.

Occupational Hazards of the Fire Service

By Carl W. Irwin, M.D., Bangor, Maine, Surgeon, Association of Fire Chiefs of Maine

PART III — Conclusion

Most thinking people, including those actively participating in the Fire Service, realize and accept the spectacular hazards of fire fighting as "part of the game." Too few, however, seem to be aware of the less dramatic but no less dangerous aspects of a fireman's profession. Many of these aspects are so routine as to be regarded lightly. Even more serious, little is done to lessen these hazards. This series of articles has been prepared to help the members of fire fighting organizations recognize and possibly prevent some of the things that cause loss of lives and services of experienced fire fighters. Parts I and II were published in the June and July, 1953, issues of FIREMEN *magazine.*

MOTOR apparatus, ladders, and hose should be the best available under necessary financial limitations. This equipment should be chosen to fit the specific community, and not necessarily be patterned after that of a larger community with entirely different fire problems. This is particularly true of some rural areas, where equipment may be bought with little thought as to road conditions, type of terrain, or availability of water supplies. In no case should protective equipment be neglected in order to purchase a "fancy" piece of apparatus.

Equipment, once obtained, must be kept in top operating condition. This applies just as well to a flashlight as it does to a thirty-five thousand dollar aerial. The failure of either at a fire may result in loss of life. There are bound to be certain failures of equipment at fires. These failures can be kept to a minimum by regular and thorough testing. Minor repairs should be made at once. Any major repairs should be done by trained and qualified personnel; the department will save money in the long run. Equipment must be kept clean. Aside from the desire of any department to appear "spic and span," regular cleaning serves many other purposes. The firemen become more familiar with each piece of equipment. There is a quick inspection each time the equipment is cleaned. Clean equipment lasts longer and works better.

Most organized fire departments carry a certain amount of first-aid medical equipment. In many cases, this is selected poorly, or is inadequate for the situation encountered. First-aid equipment need not be elaborate, and even the smallest department can afford the basic items. As a matter of fact, it cannot afford to be without such items.

Our objective is sufficient, appropriate equipment, kept clean and in good repair. This objective can never be reached fully, but every department can improve its own situation by constant, careful attention to the details of equipment maintenance.

THE control of the individual as a cause of disability starts before the man actually becomes a fireman. The importance of care in selecting personnel for the fire service can not be over-emphasized. Before any man is permitted to enter the service, he should be required to pass an adequate examination. Preferably, this should be competitive. This rule of pre-service examination should apply to volunteer as well as paid personnel. A volunteer can be just as much of a hazard to himself and others as a paid fireman. The initial examination should include a rather comprehensive test of emotional situation and reactions, as well as the more-usual physical and mental tests. If possible, these aptitude or adaptability tests should be given under the direction of well-trained examiners. Such a group of examiners should include a physician, a psychologist or psychiatrist, a fire service officer, and a personnel director from some non-municipal industry. Suitable aptitude tests are available, but they should be supplemented by personal interviews with the applicant.

The so-called "mental tests," as contrasted with aptitude tests, are probably less important. The man should be sufficiently intelligent to understand instruction, follow directions, and be capable of independent decisions. It is not enough to know that the applicant can read the comics and write his name.

The initial physical examination must be a complete one, if tragic examples of needless disability are to be prevented. It is not necessary that the man be a husky six-footer, but he should be sufficiently large and muscular to carry out the emergency duties he will be called on to perform as a fireman. Coordination is important; an active, well-coordinated small man is far better than a muscle-bound, clumsy work-horse. Particular attention must be paid to the heart and lungs, for the reasons outlined previously. The examination should include an X ray of the chest. Remember, all of these tests should be done before the individual is accepted as an applicant for the fire service.

Once these initial tests are completed, those who seem to be suitable should be placed on a probationary status for a definite period, usually six months. There is a definite reason for this: no group of tests is foolproof. In spite of great care in selecting men, a certain number will turn out to be "duds." The only way to weed out these men is to watch them in action. They should be under careful supervision. If they show any of the physical, mental, or emotional defects that have been detailed above, they should be dropped from the department. Again, it must be stressed that this applies to a small volunteer organization as well as to the large municipal departments.

DURING this probationary period, the fireman begins a process that should continue for the rest of his active life: training. This training has several purposes. The apparent one is to equip him to save lives and property by doing his job properly. Equally important, training may keep him or another person from becoming a grim statistic in a disability record. The trained man learns the capabilities of himself and his equipment, and also learns the limitations of each. He gains a healthy respect for the hazards of his job. From a purely selfish standpoint, his response to training will have a great deal to do with his promotions.

This training program must be well-rounded. The

fire service is not standing still, and each new technique must be studied and practiced. Each fireman should understand as well as practice these newer methods. It is not enough that he can operate a pump or climb a ladder. Modern fire-fighting and rescue equipment is so complicated that constant review is required. From a safety standpoint, training should stress the causes of disability: the individual, his equipment, and the varied situations of fire service.

Many cases of disability can be prevented by adequate medical care and supervision. The various danger signals of heart, lung, and nerve disease have been mentioned. The appearance of any of these symptoms requires an immediate and thorough examination by a qualified physician. More than that, the advice of the physician must be followed, even though this advice may seem too drastic to the man involved. Injuries, even apparently minor ones, should be treated promptly.

The most important single item in the prevention of disability is the periodic physical examination. In a group of men exposed to the hazards of fire fighting, a complete examination should be carried out each year. A surprising number of things will be found which can be corrected easily in the early stages.

THE laws and attitudes related to limited duty and even retirement need to be changed. In many cases, a partially-disabled fireman can remain a valuable member of the department while carrying out limited duties. These limitations may be simple ones, taken care of by reassignment to a job which does not result in stress or strain to the particular part of his body that is involved. This reassignment may range from transfer to a desk job to instructions to avoid excessive exposure of the eyes to smoke. It should be pointed out to these men that they are being retained in the service because of their value to the department. The reassignment or limitation should not result in financial loss or a feeling of inferiority.

RETIREMENT is a difficult problem for any man to face. No man likes to accept the fact that he is too old, or too infirm, to carry out the duties required by his position. Forced retirement is even more difficult to accept.

However, no department should be expected to take the responsibility of aggravating the disability of such a fireman. More important, it cannot take the risk that retaining such a man may result in disabling injury to another fireman, loss of life, or even loss of property. It must be impressed upon all members of the department that retirement is primarily for the benefit of the retired man, in that it may prolong his life or make his remaining years useful and comfortable ones.

In summary, our objectives should be the reduction of disability by proper selection and training of fire fighters, the intelligent use of adequate equipment, an awareness of the causes of disability, and the proper handling of cases of disability.

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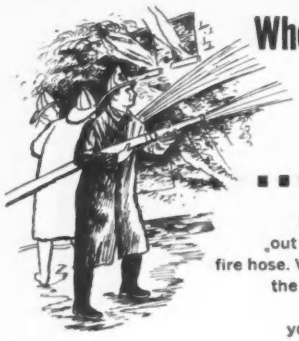

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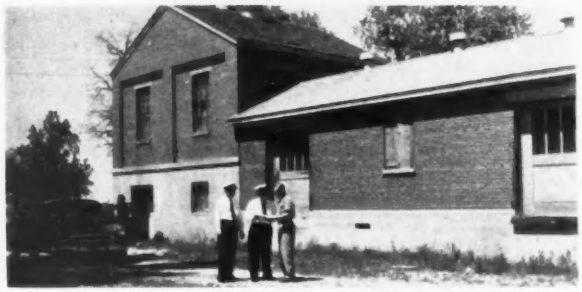


Rockford, Illinois, Fire Training Center

UNDER Chief Wayne E. Swanson (Member NFPA-IAFC Committee on Fire Department Equipment), the Fire Department of Rockford, Illinois, has been fortunate in obtaining as a fire school facility two adjoining buildings adjacent to the Rockford Airport. A 2-story brick and reinforced concrete structure will be used for structural fire fighting and a 1-story section will serve for storage of department tools and equipment.

Second Assistant Chief William Weir, Chief Swanson, and Chief Grant Baer of the Airport Fire Department are shown conferring on plans for the fire school. The Winnebago County Association of Fire Chiefs is planning a fire fighting field day here in September.

For Volunteer Fire Departments

IOWA State College has published as Bulletin 122 a pamphlet "Volunteer Fire Department Organization" on organization, articles of incorporation, and constitution and by-laws for volunteer fire departments.

Sioux Falls Fog Applicator

Straight fog applicator used by the fire department of Sioux Falls, South Dakota. A short bayonet type point was welded to a low velocity fog head attached to a straight applicator pipe for 1½-in. hose. Chief V. L. Cruisenberry (Member NFPA-IAFC Committee on Fire Department Equipment) reports that his department has been successful in controlling numerous fires in cocklofts and behind suspended ceilings by using this applicator.

Pueblo, Colorado, Dedicates Headquarters

(At left) Cornerstone laying of new Fire Department Headquarters at Pueblo, Colorado. In front row at right in uniform are Mayor Carl D. Bryan, who was made honorary chief of Pueblo during Colorado State Firemen's Convention, and Pueblo Fire Chief Ed Colglazier.

"Disaster on Your Doorstep"

PAUL W. KEARNEY, a prolific writer on fire subjects for the layman's interest, has authored an entertaining and graphic book on our nation's fire experiences. Mr. Kearney for years has been a contributor to popular magazines such as *Reader's Digest* and has had many personal contacts with fire chiefs, fire marshals and many other members of the fire service.

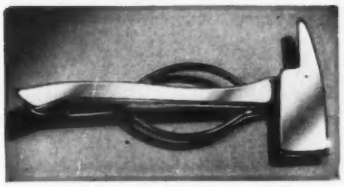
In his latest book "Disaster on Your Doorstep," published by Harper and Brothers, he has prepared some fascinating, descriptive material on some of the major fires of recent years, such as the Texas City disaster, the burning of the Canadian Lakes steamer *Noronic*, six major hotel fires, and many other tragic incidents.

As with most popular literature there are probably many comments in this book which could be improved from a technical point of view.

Mr. Kearney's righteous indignation of the tragedy of fire losses lends a colorful slant to the fire incidents, and should help to stimulate the general public to thoughts of fire protection and fire prevention.

NFPA General Manager Percy Bugbee wrote the foreword for "Disaster on Your Doorstep," and the description on the cover flap was written by Richard E. Vernor, Chairman, NFPA Board of Directors, and Manager, Fire Prevention Department, Western Actuarial Bureau, Chicago, Illinois.

The book is available for general distribution to the public and may be obtained at book stores or through public libraries.



Fireman's Tie Clip

A POPULAR item with fire fighters is this tie clip shaped in the pattern of a fire axe. Chrome plated and priced at $1.50, the clip is manufactured and sold by Fireman Ray Klemm, 1032 Malzahn Street, Saginaw, Michigan.

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(Left) Scene which greeted Houston fire fighters responding to alarms for Alfco Fireworks and Specialty Company explosion. (Right) One of the dwellings which were involved by fire following explosion.

"Fireworks Are Fun!" — (The Sign Says)

WITHIN fourteen days in June two cities in Texas experienced major fires and loss of life when explosions occurred in buildings used for the manufacture and storage of fireworks.

The first incident occurred on June 5 in a heavily populated residential area of Houston. In a 1-story building, 40 by 60 feet in area, a worker attempted to nail a "Vesuvius" firework to a display. A spark, apparently caused by the hammer striking the nail, ignited the display, which in turn sent sparks in all directions.

The building, owned by the Alco Fireworks and Specialty Company, was reported to have about 40,000 pounds of fireworks explosive and manufacturing material, including some magnesium. Within 15 seconds after the display ignited a blast occurred that devastated the building, killed 4 persons in nearby dwellings, and injured at least 113 others. The explosion and subsequent fires caused damage estimated at $1,000,000 to surrounding residences, apartments, and business properties.

The violent blast threw many jagged metal pieces of the building in all directions and shattered windows of many nearby buildings. Many of the persons injured were victims of flying glass. A large apartment building and several other houses were involved by fire spreading from the factory. Houston fire fighters responded to four fire alarms for the involved area. Police, ambulance and Red Cross assistance also arrived to help in rescue operations. Houston fire fighters were directed by Acting Fire Chief T. J. Powers, since former Chief H. F. Lyles died on May 29.

To add to the general confusion on the fire grounds a number of packages of fireworks which had been thrown about the neighborhood by the blast began to explode periodically as flames reached them. In addition blazing fireworks were exploding and emanating from all parts of the factory.

The fireworks were of the "display" type used for controlled, public exhibition. Another warehouse across the street and property of the same owner contained a considerable quantity of "commercial" fireworks. There are two other warehouses for fireworks in Houston, but according to reports these and other types of explosives will be banned from the city because of this disaster.

ON June 19 in Sansom Village, adjacent to Fort Worth, a similar explosion destroyed the storage and manufacturing warehouse of the Wilfong Fireworks Company. According to reports, employees discovered fire in the 1-story concrete block building shortly after some teen-age boys were seen firing "BB" gun pellets into a doorway of the shipping room. Smoke was observed emanating from a stock of fireworks near the door, then a slight but audible explosion occurred. Fire spread to other fireworks, then a larger explosion blasted through the plant levelling most of the structure with the exception of a small portion of the office section. Fifteen employees suffered injury during this explosion and fire.

Sansom Village is just beyond the corporate limits of Fort Worth. Sansom fire fighters responding to a telephone alarm called for mutual aid assistance and a total of 16 fire companies participated in the fire fighting. The building, however, was almost destroyed by the blast and the fire was controlled by four 2½-in. lines, four 1½-in. lines and 13 booster lines. Damage was estimated at $250,000.

Ironically descriptive signs (circle and at right) added a bitter touch to this fire scene for Sampson fire fighters. In his report to the NFPA, C. C. Killian, Chief of the Fort Worth Bureau of Fire Prevention, expressed the hope that published accounts of such disasters would result in a nationwide ban on fireworks.

Long range, solid cone of Rockwood WaterFOG snuffs out fire.

"Little Mo" knocks 'em down

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"Little Mo" — a small fire truck that's packed to the hilt with Rockwood fire-fighting equipment — streaks to fires, knocks 'em down and quenches them in seconds. Can be operated by one man, if necessary!

In the test above, fuel in a pit under the tank cars was set on fire — and more fuel poured on top of the cars from pipes. This, too, was ignited and the blaze given a minute's start. In rushed "Little Mo" — and out went the fire in 45 seconds, choked off by Rockwood WaterFOG from Rockwood's Remote Manual Control Turret. What's more, 10 inches of water still remained in "Little Mo's" 200-gallon booster tank, after the fire was out.

It's Loaded! "Little Mo's" equipment includes: 4 stage centrifugal pump with electric primer, 200-gallon booster tank, Rockwood Dual Suction Proportioning System for FOAM and "Wet", Rockwood Remote Manual Control Turret controlled from within cab, Rockwood Ground Sweep Nozzles, Rockwood Remote Control Ball Valves, 2 Hannay reels with 200 feet of high pressure hose with new Rockwood High Pressure Handline Nozzle on each reel.

Thanks to Rockwood portable fire-fighting equipment, even a small truck like "Little Mo" can battle fires with powerful efficiency. The Turret Nozzle, alone, discharges solid water stream, WaterFOG, FogFOAM, solid FOAM, "Wet" solid water, and "Wet" WaterFOG! Rockwood engineers water to cut fire losses.

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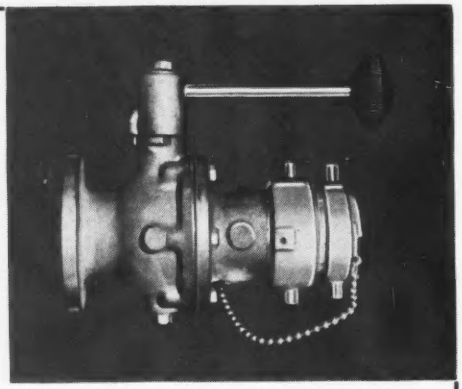
Valve is also available with 2½" Navy-Type slotted swivel and slotted plug.



Above — View of 2½" Hale Ball-Type "BL" Suction Valve shown with female National Standard thread and Pin Lug Plug and Chain. Plug and chain are optional.

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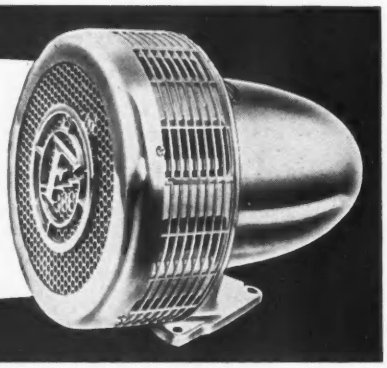

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Treatment of Burns

(*Continued from page 9*)

Many burn victims inhale hot gases, smoke, or even actual flame. This results in two dangerous conditions. First, the burning of the lining of the trachea and bronchi (windpipe) causes an exudate of fluid, which considerably hinders breathing. Second, the inhalation of smoke and heated gases is usually accompanied by the inhalation of considerable amounts of carbon monoxide in an already oxygen deficient atmosphere. It is not generally appreciated that the gases evolved in the burning of ordinary household combustibles, even in the presence of adequate oxygen, result in concentrations of 6 percent or higher, of carbon monoxide. If breathing in the burned patient appears labored, or if he is unconcious, the immediate and continued administration of oxygen by inhalation is indicated. Oxygen should be given in full concentration (100%) and not as carbogen (addition of from 3 to 7% carbon dioxide).

The prevention of the other complications mentioned (*i.e.*, liver dam-

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age, adrenal failure, kidney failure) do not lie within the province of the first aid team, nor would discussion of the technical problems involved add to a basic knowledge of the pathologic physiology of burns. If shock is properly treated, and burns promptly and properly covered, this is the best insurance against the development of these complications.

First aid for burn victims is an important step in the treatment they receive. A knowledge of the physiologic changes in burns is of value in understanding the treatments to be applied. Careful attention to the principles outlined here should enable first aid teams to contribute to further lowering of the mortality rate and reduction of the morbidity caused by burns.

Anemometer of Benton Harbor

Chief M. Shepherdson, Benton Harbor, Michigan, has furnished the above pictures showing the anemometer donated to the department by Mr. Charles Zollar of Aircraft Components, Inc., in appreciation for work done by the department in conjunction with the Benton Township Department at a fire in the property of Aircraft Components. The machine shows wind direction and velocity and should be extremely useful to the fire department in predicting fire danger occasioned by high wind and in indicating the direction of wind which might affect exposure protection. Top photo shows Fire Fighter Harold Johnson checking cup rotors and velocity transmitter shaft. Below, Lieutenant Clarence Clapp reads the results in the fire station.

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Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. No other drying method is so fast — so economical — so easy to use.

Circul-Air Dryers have passed the Approvals Tests and are listed by the Underwriter's Laboratories, Inc., Chicago and the Canadian Standards Association.

Write for Catalog TODAY

THE CIRCUL-AIR CORPORATION
575 East Milwaukee Detroit 2, Michigan

for RUGGED DUTY!

MIDWESTERN
PROTECTIVE CLOTHING

The overwhelming preference for Midwestern Protective Clothing is the result of outstanding performance when the going is tough and the chips are down. The superior quality, design, fabric texture and many exclusive features found in Mackinaw Coats and other Midwestern garments help increase your department's efficiency and provide extra protection for your men at the scene of the blaze.

PROTECTION
COMFORT — SERVICE

You will find the type of fabric exactly suited to your needs in our wide selection of rubber materials. You can absolutely depend on the softness and flexibility of these high-grade materials to meet your most exacting requirements for lasting comfort, rugged service and greater efficiency on the job.

MIDWESTERN MFG. CO., Mackinaw, Illinois
Manufacturers of the Famous **MACKINAW Coats**

POWHATAN

One Quarter Turn Siamese

Best your money can buy!

This is but one item in our vast line of precision tooled, strongly built, brass fire-fighting equipment. Since 1892 our single aim has been — improvement of our products — and repeat orders from Fire Departments all over the United States have proven the value of such a policy.

POWHATAN BRASS
and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia
Established 1892

U. S. Army Fire Experience

THE Fire Prevention and Protection Branch of the Office of the Chief of Engineers, U. S. Army, is urging more fire prevention inspection work by fire fighting personnel of Army fire departments during "on-call" periods. This point is a major recommendation for fire prevention in U. S. Army properties listed in the Army's Fire Loss Summary for fiscal year 1952, prepared under the direction of Clarence F. Castle, Assistant, Repairs and Utilities Division. In U. S. Army properties in Continental U. S., there were 526 fires of reportable size during fiscal year 1952, a reduction from 750 of the previous year. Losses in 1952 were $3,800,000 as against $10,900,000 in 1951. Biggest fire was at Voorheesville Area, Schenectady General Depot, September 25, 1951, $2,000,000 loss. Largest of losses overseas, which are separately reported, was $1,400,000 in a wooden barracks area, at Camp Zama, Japan, resulting from a conflagration in an inadequately protected camp. Deaths in fires reported were 13 in U. S., 4 overseas.

Change in F.C.D.A.

IN A recent organizational change in the U. S. Federal Civil Defense Administration the Fire Services were advanced to the status of a Division in the Public Safety Office. Mr. Kyle P. Laughlin is now Director of the Fire Division. It is believed that this gives increased recognition to the role of fire protection in civil defense planning.

"Ed" Jagger Resigns

GENERAL Manager James E. Jagger, International Association of Fire Chiefs, has submitted his resignation effective in August. Mr. Jagger has been with the IAFC for several years after serving as Field Secretary for the American Society of Civil Engineers.

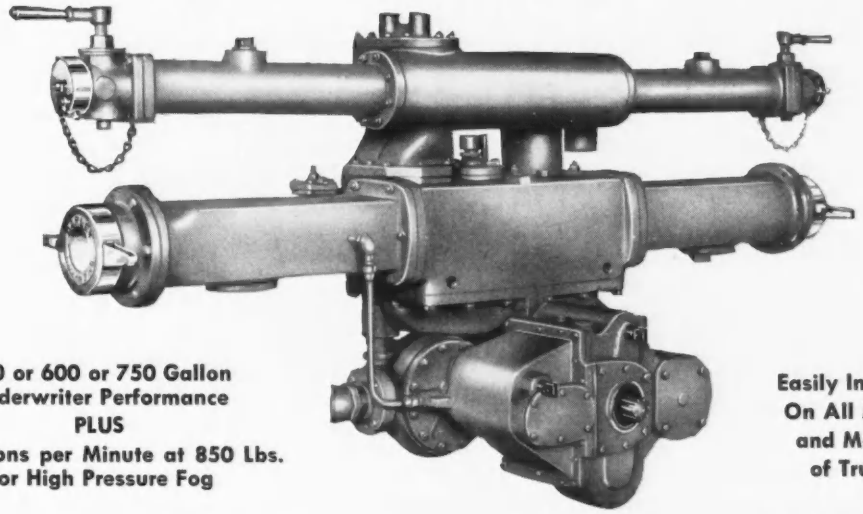
If You're In The Market for A New Fire Pump It Will Pay You To Test A Champion Before You Buy Any Pump

If your Department is planning the purchase of a Fire Pump for replacement of a worn out pump or for building a new fire truck, you will want to consider our offer to let you try before you buy. You can order any pump from us with the understanding that you have the privilege (without any obligation to purchase) of mounting the pump on your chassis and making any tests to prove Champion superior performance to yourselves.

If the Champion Centrifugal does not come through every test with flying colors you can ship it back and we'll pay the freight both ways. Your chassis will not be altered or damaged, in any way. We welcome competitive tests — test a Champion alongside any other fire pump of same capacity. That is, if you can find another pump manufacturer willing to ship a pump on trial.

Our offer applies to any Champion Fire Pump or Portable Pumper you may select.

The 3-Stage DUAL SERVICE CHAMPION



500 or 600 or 750 Gallon Underwriter Performance PLUS 60 Gallons per Minute at 850 Lbs. For High Pressure Fog

Easily Installed On All Makes and Models of Trucks

PERFORMANCE REPORT OF ACTUAL TEST—SH500 THREE-STAGE CHAMPION FIRE PUMP

POWERED BY 140-HORSEPOWER ENGINE
OUTPUT FROM THIRD STAGE

Volume	*Pressure*	*Engine Speed*
190 G.P.M.	500 Pounds	2240 R.P.M.
157 G.P.M.	600 Pounds	2350 R.P.M.
125 G.P.M.	700 Pounds	2530 R.P.M.
92 G.P.M.	800 Pounds	2700 R.P.M.
77 G.P.M.	850 Pounds	2780 R.P.M.
61 G.P.M.	900 Pounds	2870 R.P.M.

OUTPUT WITH FIRST AND SECOND STAGES IN PARALLEL AND OPERATING SIMULTANEOUSLY WITH THE THIRD STAGE

Volume	*Pressure*	*Engine Speed*
65 G.P.M. (from third stage)	500 Pounds	2370 R.P.M.
500 G.P.M. (from first and second stages)	120 Pounds	2370 R.P.M.

OUTPUT WITH FIRST AND SECOND STAGES IN SERIES AND OPERATING SIMULTANEOUSLY WITH THE THIRD STAGE

Volume	*Pressure*	*Engine Speed*
60 G.P.M. (from third stage)	600 Pounds	2260 R.P.M.
250 G.P.M. (from first and second stages)	220 Pounds	2260 R.P.M.

AT YOUR SERVICE: Sales and Service Representatives — East, Midwest, North, South

W. S. DARLEY & CO., Chicago 12

Factories—Chicago and Chippewa Falls, Wis.

CAIRNS

The "NEW YORKER"

(No. 5A — Regulation)

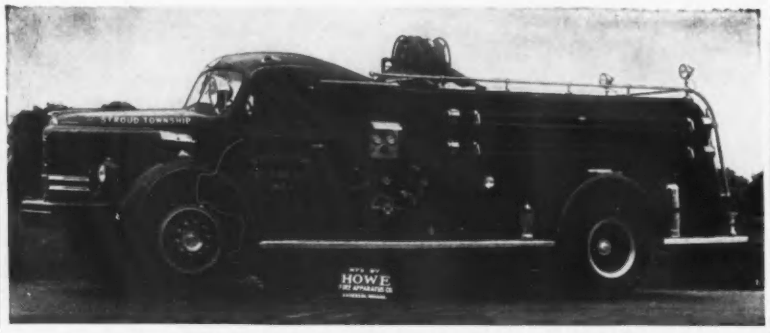
In Leather

Made of selected, tough, top-grain steer hide, specially tanned and treated for hardness and heat resistance, the "NEW YORKER" is the safest, strongest, most durable helmet ever made. Service records of 30 years and more are not unusual, proving that the "NEW YORKER" is the least expensive helmet a fireman can buy— a helmet good for a lifetime of active service.

We also make Leather Helmets in drop brim and other styles, and in other weights. Write for Catalog 340.

CAIRNS & BRO., Inc.— Allwood, Clifton, N. J.

FIRE HELMETS



HOWE Fire Truck Equipment Meeting Every Service Since 1872

Centrifugal, Rotary, and Piston Pumps supplied

HOWE FIRE APPARATUS COMPANY, 1406 West 22nd Street, Anderson, Indiana

WATER when and where you want it!

with **HARODIKES**

Portable Canvas Water Tanks

THE ECONOMICAL AND EFFICIENT WAY TO CARRY AND STORE WATER.

EXCLUSIVE FEATURES

- **Self Supporting**
- **Easily Back-packed**
- **Ideal for Relay Pumping**
- **Easily Transported**

Available in 150 & 300 gallon sizes

A WATER SUPPLY AT THE SCENE OF THE FIRE

ON THE JOB - ON THE SPOT
KEEPING AMERICA GREEN

Write TODAY For Full Information and Price List

HARODIKES INCORPORATED

NORTH DIGHTON, MASSACHUSETTS

1953 Municipal Year Book

THE 1953 edition of the Municipal Year Book, published by the International City Managers' Association, is now available. Priced at $10 per copy the book is a useful reference source on municipal government trends and activities in the United States.

Regular features brought up to date in the new edition present information covering revenues, expenditures, number of employees, salaries and other data for every U. S. city of 10,000 population or more. A section is devoted to fire personnel and salary data, working hours, fire department expenditures, fire losses, and fire insurance classification for each city.

Copies of the Municipal Year Book may be obtained by writing to "The Municipal Year Book," 1313 East 60th Street, Chicago 37, Illinois. Specify by year the edition that is desired.

Membership Report

THERE has been an encouraging increase in the circulation of FIREMEN magazine to the members of industrial fire brigades. As of July 7 a total of 255 industrial concerns possessed NFPA memberships and FIREMEN was being distributed to 2,344 individuals in these concerns.

NFPA membership is available to any interested organization and industrial concerns having such membership may obtain FIREMEN at the low cost of $1.25 per subscription, in addition to the regular membership dues of $12.50.

NFPA welcomes the following fire departments who have enrolled as NFPA Fire Department members. Present NFPA Fire Department membership totals 2,097 fire departments and 24,675 men.

Indiana: LaPorte Fire Department, LaPorte.

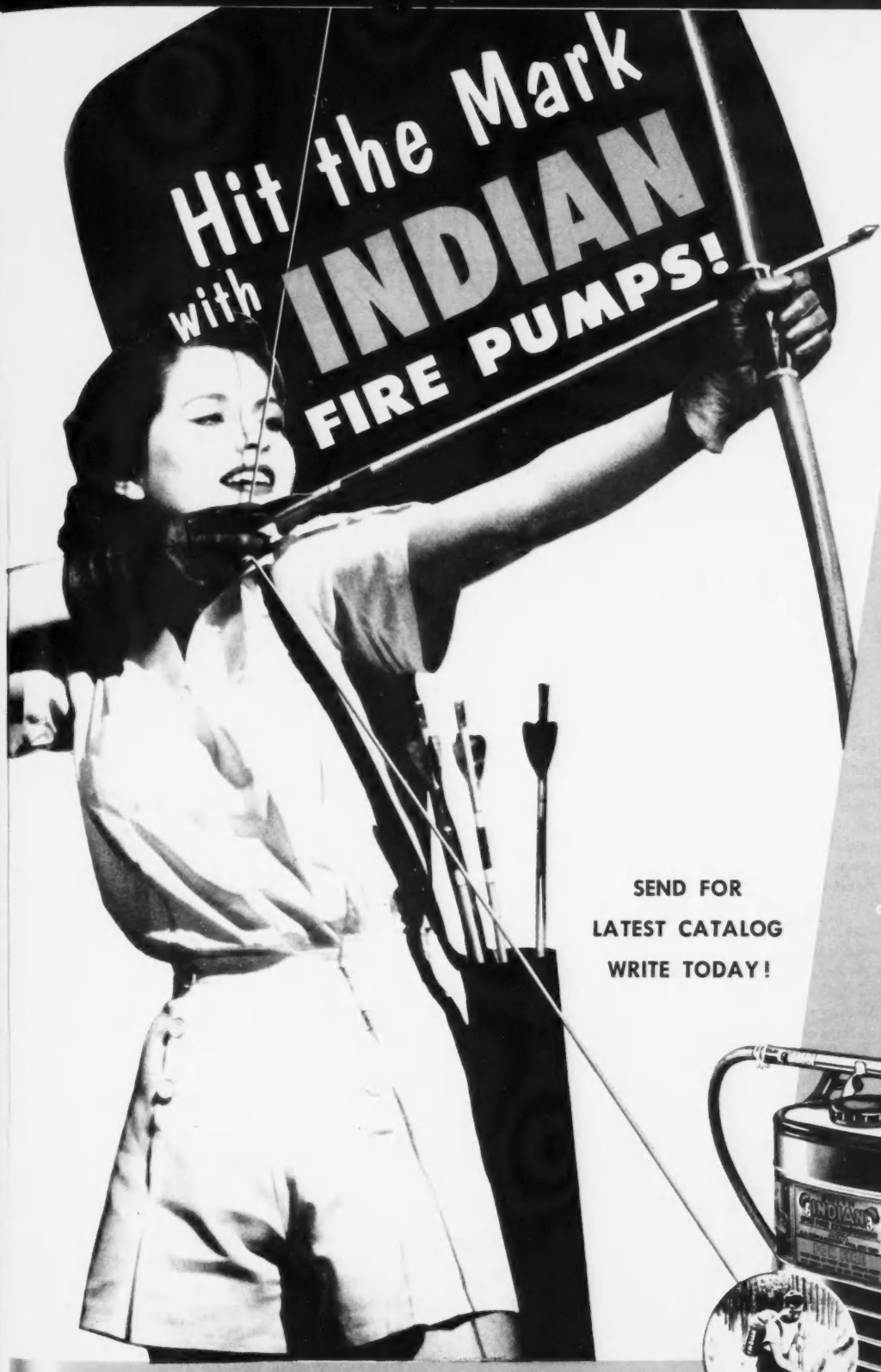
Maine: Union Fire Department, Union.

Massachusetts: Southwick Fire Department, Southwick.

Michigan: Ira Township Fire Department, Fair Haven; Chief Laurence Tanner, Mt. Pleasant Fire Department, Mt. Pleasant.

Pennsylvania: Rolling Hills Volunteer Fire Company, Pittsburgh.

South Dakota: Lead Fire Department, Lead.



Aim toward faster, more efficient fire fighting with back-pack INDIANS . . . the all 'round, clear water extinguishers with hundreds of uses. No upkeep cost. No chemicals to buy. Read what this fire chief says:

"We consider Indian Fire Pumps one of the most important pieces of equipment in our company. Just two days ago we saved a Dry Goods store and several other buildings with small water damage by using Indians.

Indians play a large part in extinguishing many of our fires and we intend to get more in the near future."

J. S. Williams

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LATEST CATALOG
WRITE TODAY!

D. B. SMITH & CO.

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PACIFIC COAST BRANCHES:

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San Francisco 7, California

Fred E. Barnett Company
2005 S. E. 8th Ave.
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Titan Chain Saws, Inc.
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Seattle, Washington

Roy G. Davis Company
617 East Third Street
Los Angeles, California

Fred E. Barnett Company
600 Spring Street
Klamath Falls, Oregon

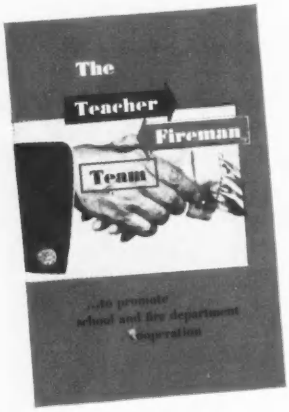
L. M. Curtis & Sons
426 West Third Street South
Salt Lake City, Utah

CANADIAN AGENTS:

Fleck Brothers, Limited
110 Alexander Street
Vancouver, B. C., Canada

C. E. Hickey & Sons, Ltd.
Hamilton, Canada

Every teacher will welcome . . .



. . . a visit from YOU, if you are a fire fighter who understands a teacher's problems of developing a program for fire safety in the school.

To promote better understanding and liaison between fire departments and teachers, the National Fire Protection Association in cooperation with the National Education Association, has prepared this 20-page illustrated pamphlet entitled "The Teacher-Fireman Team."

It outlines fundamental steps of preparation and cooperation which will help both teacher and fire fighter to present effective fire prevention programs to school children. Helpful lists of "Do's" and "Don'ts" for both teacher and fireman are included in the pamphlet. Fire department representatives will be particularly interested in the sections devoted to fire drills, visits of children to the fire station, and the selection of fire fighters who will make personal contact with the classrooms.

Copies of the pamphlet are available at the following prices:

Single copy, 15 cents; 2-9 copies, 10 percent discount; 10 to 99 copies, 25 percent discount; 100 or more copies, 33⅓ percent discount.

Write to:

NATIONAL FIRE PROTECTION ASSOCIATION
60 Batterymarch Street
Boston 10, Massachusetts

"Smokey Stover" Rides Again

TALENTS of nationally syndicated cartoonist "Bill" Holman help to provide some unique and humorous situations and terms in the newest comic book "Smokey Stover" just published by the NFPA. The 16-page colorfully illustrated publication presents "on duty" sequences in the life of "Smokey" and is prepared especially to call attention to fundamental fire prevention practices.

Fire fighters of every rank and length of service should get many a chuckle from Mr. Holman's illustrations of fire equipment and unusual fire terms. "Smokey" and his chief operate from "Lisle Hose Company No. 1." with such items as a double nozzle and "pickle hose." Many readers of FIREMEN undoubtedly are familiar with Mr. Holman's talents since his cartoons are published in newspapers of 36 cities of the United States through the Chicago Tribune-New York News Syndicate, Incorporated.

Also prominent in this latest comic book is "Sparky" the fire house dog who serves as the symbol of the fire prevention campaign sponsored by the NFPA with the cooperation of the Advertising Council.

This is the fourth comic book published by the NFPA in recent years. More than 2,500,000 copies of the three previous publications were distributed throughout the nation.

Many fire departments have secured community-wide distribution of these fire prevention comic books through civic organizations such as service clubs, women's organizations and other groups. Effective distribution of these comic books may also be obtained during Fire Prevention Week, October 4–10, 1953. "Smokey Stover" should provide entertainment for both children and adults, and at the same time help fire department members to promote safe practices of fire prevention.

Fire departments interested in obtaining copies of "Smokey Stover" should write to the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts. Single copies may be obtained for 5 cents each; price for 100 copies is $5.00; while 1,000 copies may be obtained for only $45.00.

●

Dates to Remember

Kansas: The 24th Annual Kansas State Fire School will be held at the University of Kansas, Hutchinson, October 20–23. Write to Gerald Pearson, Director, Extension Classes, 111 Fraser Hall, University of Kansas, Lawrence, Kansas.

Maryland: The 20th Annual Short Course for Firemen will be held at the University of Maryland, College Park, September 8–11. Write to Robert C. Byrus, Director, Fire Service Extension, University of Maryland, Box 85, College Park, Maryland.

New York: The New York State 5th Annual Fire Instructors Conference will be held in Buffalo, October 5–9, in cooperation with the Buffalo Fire Department.

Ohio: The Ohio State Fire School will be held at the University of Ohio in Columbus, September 8–11. Write to Harvey Walker, Director, Ohio State Fire School, Ohio State University, Columbus 10, Ohio.

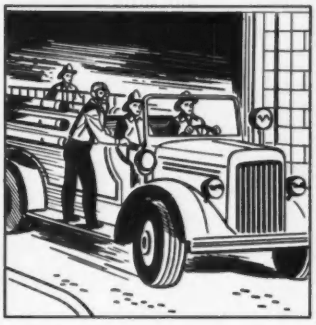
Virginia: The Virginia State Fire School will be held September 14–18 at No. 9 Fire Station, 115 Thole Street, Norfolk. Write to Fire Marshal Clay A. Easterly, Director, Box 1112, Martinsville, Virginia.

How this M·S·A Man became a "member" of the McMinnville Fire Department

for 5 important minutes!

When James C. Sheehan, representative for the M.S.A. Atlanta Office, was invited to a meeting of the McMinnville, Tennessee, volunteer fire department to demonstrate the advantages of the M.S.A. Chemox, he got more of an opportunity than he bargained for—

1. Jim Sheehan had just started his Chemox demonstration to the volunteer group when a fire alarm rang in.



2. Invited to "come along," Sheehan, with his Chemox still strapped on, hopped aboard with the crew.

3. At the scene, a roadside mart, Sheehan proved to be the only man equipped to enter the smoke-filled building safely.

4. Armed with spotlight and hose line, he climbed through the boiling smoke to the attic and extinguished the fire.

After the fire was out, just three minutes from the time Jim Sheehan entered the attic, Fire Chief D. L. Davies and his men had plenty to say about the Chemox. They agreed that without the Chemox, the building would have probably been partially destroyed and that it would have been a good two-hour fight.

Chief Davies said, too, that it was a mighty impressive demonstration, and placed an order for two Chemox.

The instant you say "TROUBLE" you're ready for it with M·S·A Chemox

Because Chemox needs only your breath to release its pure oxygen for your complete breathing protection, it's ready instantly, under any conditions. And because Chemox oxygen-generating canisters do not depend on high pressure cylinder valves which may leak—require no extra apparatus for recharging—can be stored indefinitely—you're assured of positive and effective service.

Chemox Mask is on in a matter of seconds; permits close-range fire fighting in unbreatheable or oxygen-deficient atmospheres. Write for details.

MSA

SAFETY EQUIPMENT HEADQUARTERS

Call the M.S.A. man on your every safety problem . . . his job is to help you

MINE SAFETY APPLIANCES COMPANY

201 North Braddock Avenue, Pittsburgh 8, Pa.

At Your Service: 76 Branch Offices in the United States

MINE SAFETY APPLIANCES CO. OF CANADA, LIMITED

Toronto, Montreal, Calgary, Edmonton, Winnipeg, Vancouver, New Glasgow, N.S.

Representatives in Principal Cities in Mexico, Central and South America

Cable Address: "MINSAF" Pittsburgh

What's New in Fire Equipment?

Change in Company's Name

The Superior American Fire Alarm and Signal Company, 85 Tremont Street, Meriden, Connecticut, has announced a change in name to "Superior American Fire Alarm Division of Ansley Electronics, Incorporated." Manufacturers of a complete line of fire alarm systems, the Company points out that the change will in no way affect its policies, ownership, nor its organization in either management, sales or production.

All-Metal Hose for CO_2 Systems

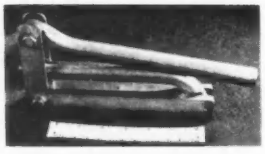
Titeflex, Incorporated, 500 Frelinghuysen Avenue, Newark, New Jersey, manufactures all-metal hose for flexible discharge loops on built-in carbon dioxide extinguishing systems and marine fire extinguishing systems. As shown above, the loops connect the discharge heads of the cylinders to the manifold. According to the manufacturer the brass alloy flexible hose is designed for a working pressure of 1500 psi and has a bursting pressure of 5000 psi. A convoluted brass innercore provides flexibility and resists rust and corrosion. The hose is supplied in sufficient lengths to allow up-and-down movement of the cylinders during weighing for gas content. Write to the manufacturer at the above address for further information.

Brochure on Low-Cost Floor Resurfacing

A new two-color brochure describing low-cost Mastic floor resurfacing has been prepared for distribution by United Laboratories, Incorporated, 16801 Euclid Avenue, Cleveland 12, Ohio. The literature explains in detail necessary proportion or mixing and ingredients specified for certain jobs. "ULI Low-Cost Mastics" are used both as a new surfacing over old concrete or wood floors as well as an underlayment for leveling floors prior to the application of tile or linoleum. The new brochure and further information may be obtained free by writing to the manufacturer at the above address.

Light Weight Salvage Covers

C. R. Daniels, Incorporated, 4900 Wetheredsville Road, Baltimore 16, Maryland, manufactures salvage covers for protection against fire and water damage. Two types of covers are available. Named the "Dandrux" and the "Dandry" the covers are available in standard sizes of 12 x 14, 12 x 18, and 14 x 18 feet, with two seams per cover. Impregnating treatments are used on the covers which, the manufacturer claims, makes them water-resistant, fire resistant, and rot resistant. All sides of the covers are hemmed with lockstitching and heavy rust-proof brass grommets are provided. Write to the manufacturer at the above address for literature and further information.



Compact Hose Clamp

Captain Leo M. Goodman, Sr., 407 Meadowbrook Drive, East McKeesport, Pennsylvania, has obtained patents for his new "Deadline" fire hose clamp, which he designed to be carried in a fireman's coat pocket. Captain Goodman states that despite its lightness the hose shutoff is sturdy and can be manipulated easily. He is President of the Fire Chiefs' Association of Alleghany County, Pennsylvania, and a practical fire fighter. He also has been an instructor at the Pennsylvania State Fire School since 1938. Interested readers may write to Captain Goodman at the above address for further information.

Bracket Scale for CO_2 Extinguishers

A safety device which enables plant superintendents and safety engineers to check the weight of CO_2 fire extinguishers without removing and weighing them has been produced by the Am-Tel Equipment Company, 6331 Hollywood Boulevard, Los Angeles 28, California. Called the "Silent Sentry" the compact, mechanical device suspends the fire extinguisher and indicates any change in weight due to leakage, or partial use. A calibrated slot visible on each side of the red baked enamel indicates the amount of contents. The unit can be mounted on any vertical wall surface. A flanged collar clamp is furnished with the assembly and is permanently affixed to the neck of the extinguisher. A safety seal is provided for protection against tampering. It is available for 5-, 10-, 15-, and 20-pound carbon dioxide fire extinguishers. The Company is now appointing representatives throughout the country. Literature and other information may be obtained by writing to the manufacturer at the above address.

Lightweight Forestry Hose

The American Rubber Manufacturing Company, 1145 Park Avenue, Oakland 8, California, is producing the "Ranger Lightweight Forestry Hose," a cotton and synthetic fibre jacketed hose with rubber lining. The hose is flat cured to facilitate coiling and storage and is supplied in 100-ft. lengths to reduce weight and cost of couplings. It is available in 1- and 1½-in. sizes for working pressure up to 300 pounds. According to the manufacturer bursting strength is 1,000 pounds. Complete specifications and prices may be obtained by writing to the manufacturer at the above address.

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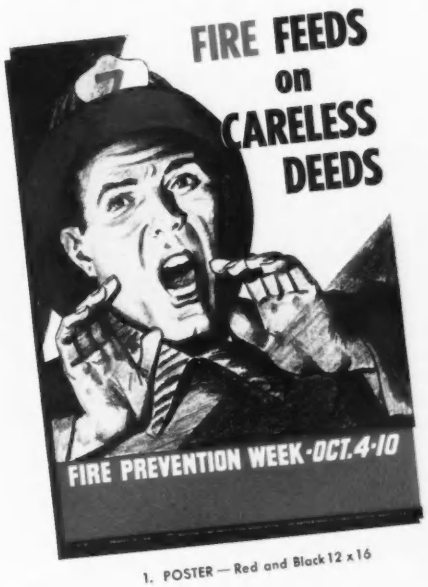
Be sure to say you saw it in FIREMEN Magazine

Distribute These Materials During

Fire Prevention Week --- October 4-10

Put them in Homes, Stores, Industrial Properties, Churches, Clubs and other occupancies.



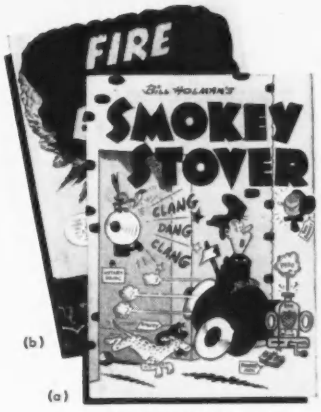
1. POSTER — Red and Black 12 x 16

2. "FACTS ABOUT FIRE" 8½ x 11
4 pg. rotogravure pictorial fact sheet

3. DISPLAY CARD 12 x 16
2 colors
Reproduction of Poster With Easel Attached

6. STICKER 1½ x 1⅛
Perforated — Use on outgoing correspondence, packages, etc.

4. COLORING BOOK — Red and Black, 16 pages of outline drawings for coloring by children, with fire prevention in song and story.



5. FIRE COMIC BOOKS 7½ x 10
(a) 16 pages — Full color — Smokey Stover's "Hot Tips" on how to prevent fires.
(b) 16 pages — Full color — Shows vital part fire fighting plays in disaster or defense of nation.

7. FLYER — Two colors 5½ x 8½

9. BLOTTER — Two colors 8½ x 4¾

10. ENVELOPE STUFFER — Two colors 6 x 3½

8. INSPECTION BLANKS — 8½ x 11
A. Self-inspection form for Industrial Plants (one color)
B. Junior Firefighters Report (two colors) Home inspection blank for school distribution
C. Self-inspection blank for Merchants (one color)

11. FOLDERS — In several colors 6¼ x 3⅛
For including in letters, home distribution, etc.

WRITE TODAY TO THE NFPA! USE ORDER BLANK ON BACK PAGE.

FIREMEN
60 BATTERYMARCH ST.
BOSTON 10, MASS., U. S. A.

Sec. 34.65 (d) P. L. & R.
U. S. POSTAGE
PAID
Permit No. 766
Boston, Mass.

Tennesee Valley Authority
Technical Library
Knoxville Tenn.

POSTMASTER: If undeliverable FOR ANY REASON, notify sender, stating reason, on Form 3547.

Order Your Materials Now For

Fire Prevention Week — October 4-10, 1953

Orders received after September 23 cannot be accepted

To catch the attention of property owners in your community during Fire Prevention Week, October 4-10, you should make the best possible use of posters, display cards, comic books, inspection blanks and other materials which have been prepared especially to present a forceful fire prevention message.

Again this year the National Fire Protection Association has a large amount of such materials ready for early distribution. Be sure that your municipality and your fire department gets the necessary quantity in time for Fire Prevention Week.

On the inside of this cover are some illustrations of the types of materials that are available. Below is a complete list, together with prices and quantity discounts available.

Merely fill in the quantity of each item that you desire and mail to the NFPA at the address shown on the order blank. Be sure that your order arrives at the NFPA Executive Office before September 23.

CLIP ALONG THIS LINE AND MAIL TO ADDRESS BELOW

FP-8-53

ORDER BLANK

Order early to forestall transportation delays. Orders received after September 23 cannot be accepted.

QUANTITY

_____ 1. Poster — $2.50 per 100, $17.50 per 1000.

_____ 2. Facts About Fire — $2.00 per 100, $15.00 per 1000.

_____ 3. Display Card — 25c each, discount for quantities.

_____ 4. Coloring Book — 5c each, $5.00 per 100, $45.00 per 1000.

5. Comic Books — 5c each, $45.00 per 1000.

_____ (a) Smokey Stover.

_____ (b) Fire and Blast.

_____ 6. Sticker — 15c for sheet of 50, discount for quantities.

_____ 7. Flyer — $1.00 per 100, $7.00 per 1000.

8. Inspection Blanks — 8½ x 11.

_____ (a) Industrial — $1.00 per 100, $7.50 per 1000.

_____ (b) Home Inspection Blank — $1.00 per 100, $7.50 per 1000.

QUANTITY

_____ (c) Mercantile — $1.00 per 100, $7.50 per 1000.

_____ 9. Blotter — $2.00 per 100, $17.50 per 1000.

_____ 10. Envelope Stuffer — $1.00 per 100.

_____ 11. (a) Folder — $1.50 per 100, $12.50 per 1000.

_____ (b) Folder — $2.00 per 100, $17.50 per 1000.

_____ (c) Folder — $2.00 per 100, $17.50 per 1000.

_____ (d) Folder — $2.00 per 100, $17.50 per 1000.

_____ (e) Folder — $2.00 per 100, $17.50 per 1000.

NOT ILLUSTRATED BUT AVAILABLE

_____ Fire Prevention Week Handbook — complete plans for a successful campaign — 15c each.

_____ Preventing Home Fires — 25c each, discount for quantities

Mail to: NATIONAL FIRE PROTECTION ASSOCIATION

60 Batterymarch Street - Boston 10, Massachusetts

PLEASE PRINT

F-9-53

NAME _____

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